



# UNITED STATES PATENT AND TRADEMARK OFFICE

tel

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,908	09/26/2001	Jaakko Lipasti	324-010486-US(PAR)	3254
2512	7590	06/10/2005	EXAMINER	
PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824			HOANG, THAI D	
			ART UNIT	PAPER NUMBER
			2667	

DATE MAILED: 06/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/964,908

**Applicant(s)**

LIPASTI ET AL.

**Examiner**

Thai D. Hoang

**Art Unit**

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-13 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 and 12-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1-2, claim 2, lines 3-4, recites "the destination routing address from the IP address of the packet is composed if no destination routing address exists" (emphasis added). It is confusing what is meant by "if no destination routing address exists" because "the destination routing address" is composed from the "IP address", which inherently includes a destination address. In addition, claim 1, lines 5-6, shows that the "routing addresses" are composed "from network layer addresses", whereas, claim 2, lines 3-4, recites "the destination routing address from the IP address of the packet is composed if no destination routing address exists" (emphasis added). Claim 2 is opposite with claim 1 because the "network layer addresses" recited on line 6 of the claim 1, or the "IP address" recited on line 3 of the claim 2 inherently includes a source address and a destination address.

Claims 3-9 are rejected because they are depended on rejected claim 1.

Claims 12-13 are also rejected because of the similar problem shown in claims 1 and 2.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 6 and 10-13 are rejected under 35 U.S.C. 102(e) as being unpatentable by Valkenburg et al., US Patent No. 6,775,258 B1, hereafter referred to as Valkenburg.

Regarding claims 1, 6, 10 and 12, as best understood, Valkenburg discloses an Apparatus, and associated method, for routing packet data in an ad hoc, wireless communication system. Valkenburg discloses the system comprises a plurality of mobile nodes that include routing information (tables 26-32) on other nodes, figs. 1-2 and 7-8, abstract, col. 2 lines 30-36. Also, Valkenburg discloses a node (Bluetooth device) generates and sends a PicoIP header 36 to which a PicoIP route setup packet is appended to form the body of the packet of data. Based on the information in the header 36, data packet is routed to the destination from a source node, col. 7, lines 4-20 (composing, in addition to network layer addresses, mobile node specific routing addresses from network layer addresses or unique mobile node device identifiers to be used as source and destination addresses of packets, and routing packets between the mobile nodes in the mobile ad hoc network on the basis of the routing addresses).

Regarding claims 2-3 and 13, as best understood, Valkenburg discloses each Bluetooth device comprises tables 26-32, which are described in figs. 2, 4-6. Due to the inherent mobility of at least some Bluetooth devices, their movement affects the routing tables contained at each of the devices. When a Bluetooth device moves, the location thereof within the Bluetooth scatternet changes, or, the Bluetooth device moves out of communication range of the scatternet. The tables provided to the Bluetooth devices pursuant to an embodiment of the present invention contain information in such tables to facilitate appropriate route setup, and rerouting, to take into account the movement of such Bluetooth devices, col. 3, lines 34-43. When a Bluetooth device is to initiate a communication session, the Bluetooth device generates and sends a PicoIP header 36 to which a PicoIP route setup packet is appended to form the body of the packet of data. Col. 7, lines 4-20 and col. 7, line 41 to col. 9, line 32, Valkenburg discloses a procedure and an algorithm for checking, generating a PicoIP header, and setting up a routing path to send data packets from a source to a destination (the destination routing address of a packet to be routed is checked, the destination routing address from the IP address of the packet is composed if no destination routing address exists, the path to the destination routing address is checked, and the packet is sent to the next hop of the discovered path).

Regarding claim 11, Valkenburg discloses the network is an ad hoc network (abstract), wherein Bluetooth devices are connectable in an ad hoc manner by way of short-distance radio links, thereby to permit data to be communicated between such

Art Unit: 2667

Bluetooth devices, col. 1, lines 44-47 (wherein the ad hoc network is a short range radio frequency network and the mobile nodes support the Bluetooth specification)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-5 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valkenburg et al., US Patent No. 6,775,258 B1, in view of Larsson et al, US patent No. 6,704,293, hereafter referred to as Valkenburg and Larsson respectively.

Regarding claim 4, Valkenburg does not disclose the Bluetooth device broadcasts for checking destination routing address. However, Larsson discloses a system and method called "Broadcast as a triggering mechanism for route discovery in ad-hoc networks". Larsson teaches this feature in figure 6, col. 5, lines 61-63. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Larsson's method into the system disclosed by Valkenburg in order to detect a routing path quickly.

Regarding claim 5, Valkenburg discloses the PicoIP header 36 is added to the packet describing routing path of the data packet, col. 7, lines 4-7. Also, Valkenburg discloses every node (Bluetooth device) routes data packet based on information contained in the PicoIP header, col. 3, lines 34-43, col. 7, line 41 to col. 9, line 32 (adding a routing extension to the packet describing the path in the source mobile node

Art Unit: 2667

sending the packet, and checking, in the intermediary mobile nodes, the path from routing extension of the packet).

Regarding claim 8, as best understood, Valkenburg discloses the system generates PicoIP header, which includes routing address for routing data packet as mentioned in claim 1. Valkenburg does not explicitly disclose the addresses are based on the standard IEEE 802. However, IEEE 802 standard is applied in almost short-range wireless network and well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply IEEE 802 standard into the system disclosed by Valkenburg in order to adapt with conventional systems used in the Network.

Regarding claim 9, Valkenburg does not explicitly disclose the routing method is performed based on protocols recited in the claim 9. However, those protocols are well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply one of above protocols in order to adapt with conventional ad hoc mobile systems used in the Network.

### ***Allowable Subject Matter***

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect to the application:

US Patent No. 6,535,498 B1, Larsson et al., "Route updating in ad-hoc networks."


US Patent No. 6,601,093 B1, Peters, "Address resolution in ad-hoc networking."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai D. Hoang whose telephone number is (571) 272-3184. The examiner can normally be reached on Monday-Friday 10:00am-18:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thai Hoang

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2667 6/8/05